

True or False

Follow the instructions to complete the activity.

NAME

DATE

Using the information in *Missions to Mars*, verify whether the following information is true or false. Check your answers in the book. List the page number where you found your information beside your answer.

- | | | | | |
|-------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|----------------|--|
| Statement 1 | The <i>Vikings</i> were carried into space by the Titan I rocket. It was powered by engines that burned liquid oxygen. | <input type="checkbox"/> True
<input type="checkbox"/> False | Page
Number | |
| Statement 2 | Small but mighty, <i>Sojourner</i> was the first rover to be used on any planet other than Earth. | <input type="checkbox"/> True
<input type="checkbox"/> False | Page
Number | |
| Statement 3 | <i>Spirit</i> took many photos of the Martian surface. | <input type="checkbox"/> True
<input type="checkbox"/> False | Page
Number | |
| Statement 4 | Mars has two tiny moons called Phobos and Deimos. | <input type="checkbox"/> True
<input type="checkbox"/> False | Page
Number | |
| Statement 5 | Radiation in space is harmless to instruments. | <input type="checkbox"/> True
<input type="checkbox"/> False | Page
Number | |



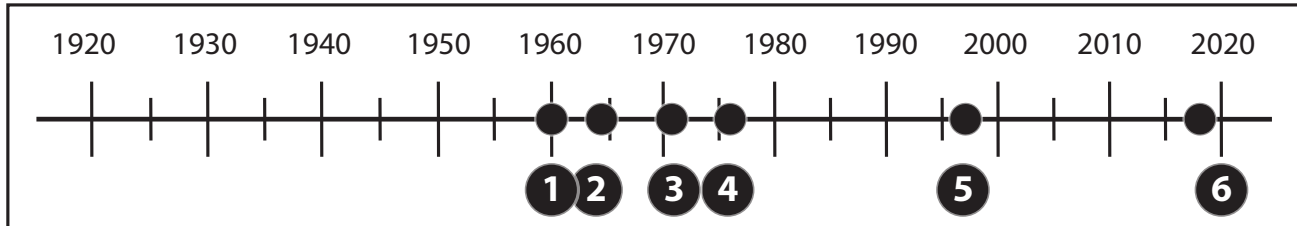
Timeline

Follow the instructions to complete the activity.

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Number the events below in the order they should appear on the timeline. Write the number in the box beside each event. Check your answers with page 21 of the book.



NASA *Pathfinder* and *Sojourner* successfully touched down on Mars and sent back 17,000 photos.

Viking 1 and *Viking 2* reached Mars and landed safely. It was NASA's first great Mars success.

InSight spacecraft landed on Mars successfully and began its exploration mission.

Mariner 9 became the first spacecraft to orbit Mars.

The Soviet Union attempted to launch probes to Mars. However, the launch failed. Even so, the Soviet Union was considered to be the pioneer in Mars exploration.

NASA launched *Mariner 3*. This marked the first NASA mission to Mars, even though it failed within two days.



Fill in the Blanks

Follow the instructions to complete the activity.

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Use the information found in *Missions to Mars* to help you complete the following activity.

1. was the first spacecraft to orbit a planet other than Earth.
2. The Mars mission took pictures of Mars. It found landscape that suggests lakes and streams were on the planet at one time.
3. The Japanese orbiter, , did not reach Mars because of electrical problems.
4. SpaceX envisions that the first homes on Mars would be built from .
5. Each *Viking* lander had two cameras. These were held in shaped housings on either side of its antenna.
6. Scientists prefer not to launch a spacecraft when and Mars are closest together.



Curiosity

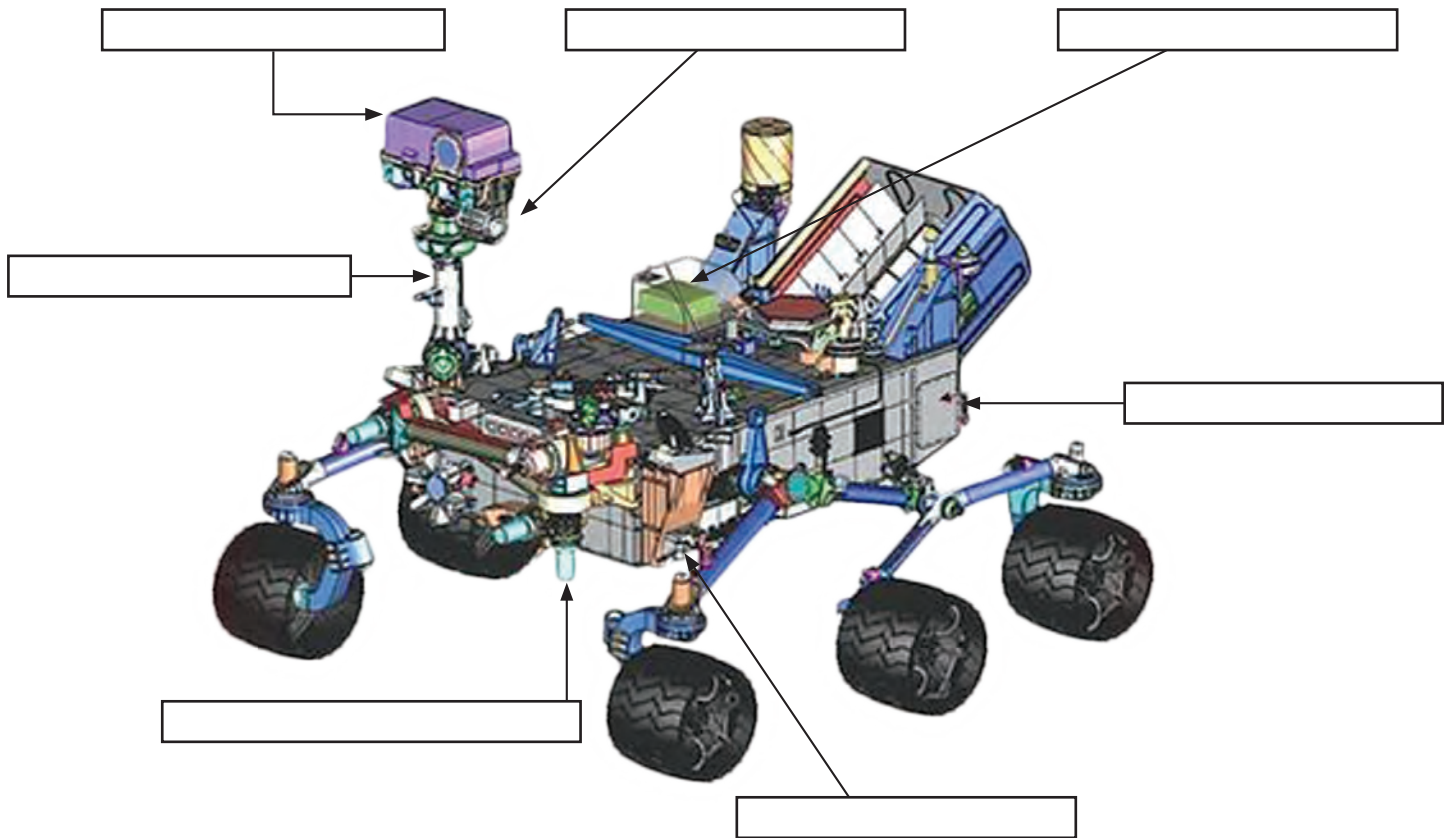
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Fill in the blanks in this diagram of *Curiosity*.

- a. DAN
- b. REMS
- c. RAD
- d. APXS
- e. ChemCam
- f. Mastcam
- g. MARDI



Complete the statements by writing the correct number in the box.

Viking 1 and *Viking 2* each had an orbiter and a lander. The orbiter weighed this many pounds.

140

Viking 1 was launched with a Titan III-Centaur rocket in this year.

83

Compared to Mars, Earth's atmosphere is made up of this percentage of nitrogen and 21% oxygen.

1975

Mars is more than this many million miles from the Sun.

78

Sojourner rolled across the surface of Mars for this many days.

1,984



Key Words Match-Up

Write the words from the list below in the box above the correct definition for each word.

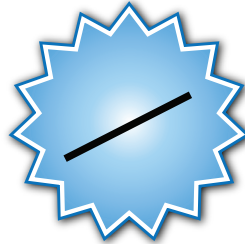
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KEY WORDS

atmosphere	neutrons	radioactive
craters	orbiter	rover
geology	probe	sediment

Your Score is



_____ %

1.
round or nearly-round holes in the surface of a planet or moon, often caused by asteroid or comet crashes

2.
tiny particles that have no electrical charge and make up part of the nucleus of all atoms but hydrogen

3.
a device used to explore

4.
a wheeled spacecraft that rolls across the surface of a planet or moon

5.
the layers of gases that surround a planet or moon

6.
the study of a planet or moon's physical structure, especially its layers of soil and rocks

7.
a spacecraft that orbits a planet or moon but does not land on its surface

8.
giving off energy in the form of rays or particles that come from atoms that are breaking apart

9.
stones, sand, or other materials that are carried by flowing water



Quiz

Test your knowledge by answering these quiz questions.

NAME

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1 Why have so many missions to Mars failed?

2 What year did the first rover land on Mars?

3 How did sending a lander rather than an orbiter help scientists explore Mars?

4 Why is Mars called the Red Planet?

5 How far is Mars from the Sun?

6 What was the significance of the *Viking 1* and *Viking 2* Mars missions?

7 What are the names of Mars's two moons?

8 How many nations are members of the European Space Agency (ESA)?

